

## Background - Lack of Testing & Diagnosis

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- *Trichomonas vaginalis* (Trich) frequently diagnosed in female STD clinic attenders, but rarely diagnosed in males
- Males not routinely tested for Trich during STD exams
- Important to make a specific diagnosis, as Rx differs from Rx for other urethritis

# Background - Lack of Information

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- Little known about epidemiology & natural history of Trich in males
- Few published studies
  - Mostly prevalence surveys
  - One longitudinal study\* where males with Trich were followed-up
  - No longitudinal studies on development of new (incident) Trich infections in males

\* Krieger JN et al. J Urology 1993; 149: 1455 – 8

# Objectives

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1. To describe prevalence of Trich in males in the RESPECT-2 study
2. To compare this with findings in females
3. To describe the epidemiology of Trich & follow-up in males with Trich

# Methods - RESPECT-2 Study (1)

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- Randomized controlled trial of HIV testing & counseling interventions for STD prevention
- Participants recruited from patients who came to 1 of 3 public STD clinics (Long Beach, Denver, & Newark) for an STD exam
- Must have had sex in the past 3 months to be eligible

# Methods - RESPECT-2 Study (2)

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- Participants randomized to either:
  - (1) Standard HIV testing with results 1 to 2 weeks later or
  - (2) Rapid HIV testing with results the same visit
- HIV-negative participants followed-up for 1 year
- STD screening & questionnaire every 3 mo

# Methods - RESPECT-2 Study (3)

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- Pilot feasibility study of Trich testing in males at the Denver site\*
- Decided to screen males & females for Trich at all study visits
- Participants without Trich result at baseline visit were excluded

\* Joyner JL et al. Sex Transm Dis 2000; 27: 236 - 240

# Methods - Testing for *T. vaginalis* & Other STDs

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- Culture of vaginal swabs (females) or urine sediment (males)
- InPouch TV kit, or modified Diamond's medium were used as culture media
- Cultures maintained for 5 to 7 days
- In females positive wet mount also accepted as evidence of Trich infection
- Participants tested for gonorrhea & Chlamydia using nucleic acid tests (NATs) of urine specimens

# Results - Demographics

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Sex (%)	Male	55
	Female	45
Race/Ethnicity (%)	Black	42
	White	27
	Hispanic	21
	Other	11
Site (%)	Denver	46
	Long Beach	34
	Newark	20

Age: 15 – 39 (Median: 25 M, 23 F)



# Prevalence Of *T. vaginalis*

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		0 mo	3 mo	6 mo	9 mo	12 mo
Male	# of Cases	15	3	4	1	0
	Prevalence (%)	1.1	0.4	0.7	0.3	0
Female	# of Cases	127	28	34	15	7
	Prevalence (%)	11.1	4.4	7.3	4.5	3.1
	F/M Ratio	10.2	10.5	9.9	15.4	--

## New Detections of *T. vaginalis*

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		3 mo	6 mo	9 mo	12 mo
Male	# of New Cases	2	3	1	0
	% of Screened	0.3	0.6	0.3	0
Female	# of New Cases	15	24	9	5
	% of Screened	2.6	5.4	2.9	2.3
F/M Ratio		9.1	9.8	10.8	--

## Factors Associated with *T. vaginalis* Detection at Baseline in Males

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Factor	No Trich (%) with Factor)	Trich + (%) with Factor)	Relative Risk (95% CI)
Trich. contact	2.2	26.7	12.2 (4.9 – 30.4)
NGU Dx	23.6	40.0	1.7 (0.9 – 3.1)
Other STD	21.2	33.3	1.6 (0.8 – 3.2)
Gonorrhea	10.2	26.7	2.6 (1.1 – 6.1)
Chlamydia	13.4	6.7	0.5 (0.1 – 3.4)

## Factors Associated with *T. vaginalis* Detection at Baseline in Males (2)

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Factor	No Trich (% with Factor)	Trich + (% with Factor)	Relative Risk (95% CI)
New Partner(s)	74.1	73.3	1.0 (0.7 – 1.4)
Age 15 - 19	14.2	13.3	1.0 (reference)
20 - 29	58.6	53.3	1.0 (0.7 – 1.4)
30 - 39	27.2	33.3	1.1 (0.7 – 1.7)

# Follow-up in Males with *T. vaginalis* cultured at Baseline

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	0 mo		3 mo	6 mo	9 mo	12 mo
1	+			-		
2	+		-			
3	+	Rx	-			
4	+		-			
5	+	Rx	-			-
6	+	Rx	-			
7	+	Rx	-	-		
8	+	Rx	-	-		-
9	+		-	-	-	
10	+		-	-	-	
11	+		-	-	-	
12	+		+			

# Conclusions

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- Few cases of *T. vaginalis* detected in males
- Detection rate 10-fold lower than in females
- May be due to:
  - (1) Infection may be more transient in males
  - (2) Culture method may lack sensitivity with urine sediment specimens
  - (3) Both the above

# Recommendations

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- Need further studies on the course of Trich infection in males.
- Need more sensitive methods of detecting Trich in males to increase the yield of screening efforts.
- Worthwhile to develop better strategies for identifying males with Trich so that they can be given appropriate treatment. This would probably be beneficial to Trich control, through limiting spread to female partners.

# RESPECT-2 Study Group

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- CDC: C Metcalf, T Peterman, B Dillon, M Iatesta, M Kamb, B Varghese, V McKleroy, L Selman, H Frederick
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- Newark: S Paul, H Cross, L Raveneau, L Parish
- NOVA Research: P Young, C Signes, R Francis Jr., C Gordon
- CAIR: S Kalichman



## Factors Associated with *T. vaginalis* Detection at Baseline in Females

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Factor	No Trich (% with Factor)	Trich + (% with Factor)	Relative Risk (95% CI)
NGU contact	4.2	6.0	1.3 (0.6 – 2.8)
Cervicitis	13.7	27.7	2.0 (1.4 – 2.7)
Other STD	14.8	25.2	1.7 (1.2 – 2.4)
Gonorrhea	5.5	11.4	2.1 (1.2 – 3.6)
Chlamydia	10.5	17.7	1.7 (1.1 – 2.6)

## Factors Associated with *T. vaginalis* Detection at Baseline in Females (2)

Factor	No Trich (% with Factor)	Trich + (% with Factor)	Relative Risk (95% CI)
New Partner(s)	62.5	65.3	1.0 (0.7 – 1.4)
Age 15 - 19	27.0	11.8	1.0 (reference)
20 - 29	49.5	52.1	1.3 (1.1 – 1.4)
30 - 39	23.5	36.1	1.6 (1.4 – 1.9)

# *T. vaginalis* Results by Visit in Males with Trich. Detected after Baseline

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	0 mo	3 mo	6 mo	9 mo	12 mo
1	-		+		
2	-	-	-	+	
3	-	-	+		
4	-	-	+	Rx	-
5	-	+			
6	-	+	+		

# Testing for *Trichomonas vaginalis* in Male STD Clinic Attenders: An Elusive Infection

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